

Atty. Docket No. RDRT 1016-1
Appl. No. 09/476,189

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Remarks

Claims 1 - 21 are in the application. Claim 17 is amended to correct an editorial error (word repetition). The amendment is made as a matter of form only, and does not narrow the scope of any claim or of any limitation in any claim. The application was subject to restriction, and the Group I claims were elected for prosecution in this application (claims 1 - 18). The Listing of Claims herein shows claims 19 - 21 as ("original") rather than as ("withdrawn"), because although the Office action acknowledges the election, the Office action not indicate any disposition of claims 19 - 21.

Reconsideration of the application is respectfully requested, in view of the following remarks.

Applicants' invention is directed to improved sliders for use in magnetic recording and retrieval apparatus.

One conventional type of slider (*see*, Applicants' FIG. 1C, and page 2, line 10 - page 3, line 2) has the read and write elements embedded in a single raised pad, centrally located at or near the trailing edge of the slider, and other features of the air bearing surface of the slider are generally symmetrical. The slider tends to roll about a generally lengthwise central axis (the "roll axis") as it flies over the surface of the data storage media. Such roll has comparatively little effect on the fly height of the centrally located read and write elements.

Conventional "side rail sliders" (*see*, Applicants' FIG. 1F, and page 4, line 7 - page 4, line 24) make use of a greater amount of available disk surface area. Conventional slide rail sliders have two pads at or near the trailing edge of the slider, one at each trailing edge corner, and the read and write elements are embedded in one of the two corner pads. This allows read and write operations right up to the outer edge of the disk. However, the roll axis in the conventional slide rail slider is a generally lengthwise central axis, midway between the two corners, so the fly height at the corners can be significantly affected by roll, resulting in degraded performance.

Applicant's invention features a slider having a single pad located at one corner of the trailing edge of the slider, in which the read element and the write element are embedded. Having the read and write elements near one edge of the slider allows for use of a greater amount of disk surface area than having the read and write elements in the center. The single pad at the trailing edge of the slider is the area of highest pressure on the air bearing surface. By having only one pad the location of the roll axis of the slider is shifted toward the pad and, thus, toward the

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location of the read and write elements. According to the invention the fly height of the slider at the location of the read and write elements is less affected by roll, providing improved performance.

The claims were rejected under 35 U.S.C. §102(e) as being anticipated by Kang *et al.* U.S. 6,333,835 ("Kang"). Particularly, the Examiner asserted, regarding claims 1, 5 and 14, that Kang shows (referring to Kang Figs. 6 and 7), among other features, "a base surface on a slider at a first elevation (69), a base surface extending to a corner defined by the intersection of a trailing edge and a second side, ... a pad (65c) extending from a base surface at a corner defined by the intersection of a trailing edge and a first side". These rejections are traversed.

Contrary to the Examiner's assertion, Kang does not describe or suggest "a base surface on the slider ... extending to a corner defined by the intersection of said trailing edge and said second side", as recited in the claims. Kang teaches a side rail slider having two raised pads at or near the trailing edge of the slider, one of them located near one trailing edge corner (raised abs surface at 65c) having the read and write elements, and the other (raised abs surface at 67e) located near the other trailing edge corner.

According to Applicants' invention as claimed (claims 1, 5 and 14), there is no raised feature on the base surface near the corner defined by the trailing edge and the second side, and that is what is meant by Applicants' claim recitations of, for example, a **base surface on the slider at a first elevation, the base surface extending to a corner defined by the intersection of said trailing edge and said second side** (claim 1), or a **base surface extending to a corner defined by the juncture of said second side and said trailing edge** (claim 5). Because according to Applicants' invention there is no raised pad on this side of the lengthwise midline of the slider, the roll axis is effectively moved toward the pad that carries the read and write elements, thereby reducing the effect of roll on the fly height at that critical point.

As Applicants' specification points out in discussing the conventional sliders having the read and write elements in one of two pads near the trailing edge corners of the slider:

[I]t is desirable to maintain, as much as possible, a constant fly height at the location of the read and write elements. Prior art systems having read and write elements disposed near a side of the slider have maintained stable flight by including a pad at both corners of the trailing edge. The first pad in such a system contained the read and write elements while the other pad balanced the high pressure generated by the first pad. The X or roll axis of such a slider was therefore maintained near the center of the

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slider. Such sliders exhibit the undesirable property that the read and write elements are disposed away from the X or roll axis. Therefore, as the slider rolls during flight the distance between the read and write elements and the disk varies.

Kang acknowledges with reference to a conventional slider having the read and write elements on a central pad, that roll affects fly height; but it says nothing whatever about roll in the context of the description of the embodiments of Kang Figs. 6 and 7.

For at least the reasons set forth above, Kang does not teach or suggest all the claimed features of Applicants' invention as claimed in each of independent claims 1, 5 and 14, and those claims are therefore patentable over Kang. Claims 2 - 4, 6 - 13 and 15 - 18 depend directly or indirectly from one of the independent claims, and carry the same recitations as the claims from which they depend, and so they are also patentable over Kang. Accordingly, the rejections over Kang should be withdrawn.

In view of the foregoing, all the claims in the application are believed to be in condition for allowance, and action to that effect is respectfully requested.

Applicants appreciate the Examiner's willingness, as conveyed on February 19, 2004 in a telephone conversation with Applicants' representative, undersigned, to conduct a telephone interview regarding the application prior to the filing of this response. Regrettably, however, the PTO file was not available and the Examiner was apparently unable to retrieve the file before the end of the shortened statutory period.

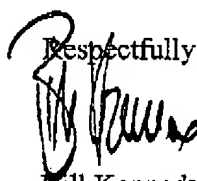
If the Examiner determines, upon receipt of this communication, that a conference would facilitate prosecution of this application, the Examiner is invited to telephone Applicants' representative, undersigned, at the telephone number set out below, while he is in possession of the file.

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This Amendment is being filed within the three months' shortened statutory period set by the Examiner for response and, accordingly, it believed that no extension of time or fee therefor is required in connection with the filing of this paper. In the event the Examiner may determine that an extension of time be required in connection with this paper, Petition is hereby made therefor, and the Commissioner is authorized to charge any fee therefor, or any other additional fee the Examiner may determine may be required in connection with this paper, to Deposit Account No. 50-0869 (Order No. RDRT 1016-1).

Respectfully submitted,


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